R E P O R T R E S U M E S

ED 016 565 RE 000 232

SOME DIFFERENCES BETWEEN SILENT AND ORAL READING RESPONSES ON A STANDARDIZED READING TEST.

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PUB DATE MAY 67

EDRS PRICE MF-$0.25 HC-$0.64 14P.

DESCRIPTORS- *READING TESTS, TEST INTERPRETATION, TESTING PROGRAMS, STANDARDIZED TESTS, *INFORMAL READING INVENTORY, GATES ADVANCED PRIMARY READING TEST,

A STUDY DESIGNED TO IDENTIFY SOME OF THE DIFFERENCES BETWEEN THE RESPONSES ON THE GATES ADVANCED PRIMARY READING TEST AND THE KINDS OF RESPONSES OBTAINED FROM AN INFORMAL READING INVENTORY (IRI) IS REPORTED. SUBJECTS WERE 65 THIRD-GRADE PUPILS IN WEST BABYLON, NEW YORK. PUPILS AT THE SAME INSTRUCTIONAL LEVEL SCORED HIGHER IN THE RECOGNITION TEST (GATES) THAN IN THE RECALL TEST (IRI). THE RESPONSES OF THE PUPILS ILLUSTRATED THAT THE RESULTS OF A TEST SUCH AS THE GATES CANNOT BE ANALYZED FULLY UNLESS THE MANNER IN WHICH THE RESPONSES WERE DERIVED CAN BE DETERMINED. ON THE IRI, WHERE THE MAJORITY OF TESTING IS ORAL, GUESSING IS HELD TO A MINIMUM. AN ANALYSIS OF PARTIAL READING INDICATED THAT PUPILS CAN READ INACCURATELY AND STILL OBTAIN THE CORRECT ANSWER TO ITEMS ON A STANDARDIZED TEST SUCH AS THE GATES. THEREFORE, INACCURATE READING ALONE DOES NOT ACCOUNT FOR CORRECT OR INCORRECT ANSWERS ON THAT TEST. SIGNIFICANT DIFFERENCES BETWEEN THE TESTS INDICATE THAT THE GATES GRADE-PLACEMENT SCORE REFLECTS A MORE GLOBAL MEASURE OF READING PERFORMANCE THAN DOES THE INSTRUCTIONAL LEVEL OF THE IRI AND THAT THE GATES SHOULD NOT BE EXPECTED TO GIVE A SCORE EQUIVALENT TO THE INSTRUCTIONAL READING LEVEL OF THE INFORMAL TEST. TABLES AND REFERENCES ARE GIVEN. THIS PAPER WAS PRESENTED AT THE INTERNATIONAL READING ASSOCIATION CONFERENCE (SEATTLE, MAY 4-6, 1967). (RH)

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ED016787

XI Research in the Pedagogy of Reading

Evaluation: Readiness Programs, Beginning Reading Methods and Reading Tests

Some Differences Between Silent and Oral Reading Responses on a Standardized Reading Test.

Research comparing the achievement of pupils on standardized reading tests with pupils' performance on informal reading tests has indicated that grade placement is often not equivalent to instructional reading level (2,4,5,8).

PURPOSE

The purpose of this study was to identify some of the differences between the responses on one standardized test (The Gates Advanced Primary Reading Test) and the kinds of responses obtained from an informal reading inventory. Specifically the purpose was to ascertain possible explanations for the answers pupils choose while taking a silent reading test. The following questions were considered in this investigation:

1. Does the measurement of word retention by a recall test result in significantly fewer words correct than when the same words are presented in a recognition test?
2. What types of skills do pupils use to select a word on the word-recognition section of the Gates test?
3. Can pupils answer certain items on the paragraph section of the Gates test without having to read the entire item?
4. Can pupils engage in partial or inaccurate reading during the regular administration of the paragraph section of the Gates test, and to what extent are children successful in correctly answering questions on which they read orally in a less accurate fashion than would be acceptable on an informal reading inventory?

PROCEDURE

In the fall term of 1964 sixty-five third grade pupils of the West Babylon, New York, school system were administered the Gates Advanced Primary Reading Test (Form 2) and an informal reading inventory. The pupils were divided into three groups roughly representing pupils whose instructional levels were at, above, or below grade level at the time of testing. Each group was called a Reading Level Section. The reading levels included in each section are listed below:

Reading Level Section I - Primer - First Reader Level
Reading Level Section II - 2^1- 2^2
Reading Level Section III - 3^1- 3^2

The three groups were found to be statistically equivalent in terms of IQ.

To shed some light on the differences between the two types of tests the Gates test was administered to some pupils in ways similar to an informal reading inventory. Specifically, the administration of the word recognition portion of the Gates test was changed to study the ways the two tests measure the retention of words. The Gates test measures retention through a recognition technique (picture and four word choices) while an informal word recognition test utilizes a recall procedure (words in isolation). Further information about the possible differences between the two tests was sought by having pupils explain certain choices on the word recognition section of the Gates test. The paragraph reading section was administered so as to investigate the possibility as suggested by Dolch (3) and Plessas (6) that pupils can mark the correct answers on a standardized reading test by reading only part of a test item. Second, the accuracy of oral reading was compared with the ability to obtain the correct response on an item.

Word Recognition

Retention. The pupils' retention of the words on the Gates Word Recognition section was determined by utilizing three measures of retention, two of which were similar to those on the Gates* and an informal.**

1. Recall** (words presented in isolation)

2. Recognition-1 (Selection a word - pronounce)

3. Recognition-2* (Picture and selecting one of four words)

Using a table of random numbers pupils in each Reading Level Section were assigned to one of the three test situations (Recall, Recognition-1, Recognition-2). This provided an equal representation of children from each of the Reading Level Sections in each testing condition.

Recall. To test the recall of words on the Gates test of word recognition each of the forty-eight correct words was shown in isolation to the twenty-one pupils. The child was asked to pronounce each of the words on the list. Each response, or lack of response, made by the pupils was recorded by the examiner. This testing yielded a number of correct responses and a record of the actual response for each word incorrectly pronounced.

Recognition-1. The twenty-two pupils in this group were instructed to mark the word pronounced by the examiner for each item. This required the child, who was using the regular testing booklet, to find and circle the one word pronounced from among the four printed choices. This task eliminated picture interpretation and excluded the use of meaning in the choice of a response.

Recognition-2. Pupils in the third group received the test under the recommended conditions of administration. That is, these twenty-two pupils were to encircle the word which they decided best fit the pictured idea for each item. When finished, each

child in this group was asked to explain how he arrived at certain responses in his test booklet. The remarks by the pupil was then recorded by the examiner on a separate test booklet.

Paragraph Reading

The relationship of partial reading and inaccuracy of reading upon test scores was investigated by manipulating the administration of the paragraph reading section of the Gates test. The possibility of reading only part of the material and the extent of inaccurate reading were examined by administering the Gates test in the following ways:

1. Following directions only (effect of induced partial reading)

2. Normal administration with oral re-reading (check on accuracy of reading)

The pupils were again randomly assigned from each Reading Level Section to one of the two testing conditions by using a table of random numbers. The first method of presentation permitted the pupils to read only the directions for each item. Any preceding written information was concealed to accomplish this end. The pupils were instructed to read and follow the directions as best they were able in the absence of other information. As has been previously described, this test consists of a series of items with pictures and a short paragraph. The following is a sample of such an item:

Four pictures which portray:

Boy holding a small fish — Boy holding a large fish

Boy holding a small fish — Boy holding a small fish

10. (When we went fishing the scout leader said he would give 25¢ to the one who caught the biggest fish)* Draw a line under the boy who has the biggest fish.**

For the pupils in the second group, the test was administered in the usual manner. The child was to read each item and follow the directions at the end of the selection as indicated in the sample above. As these pupils finished, they were asked to explain what they did to answer items, 1, 7, 9, 16, 18 and 24. These items include both those which were judged to be answerable without reading the entire item (as in the previous example) as well as some which seemed answerable only when a part of all of the preceding information had been read.

The writer then met individually with the pupils in the second group to record the oral reading and explanations by each child. The pupils were directed to read to the examiner just what he read during the silent reading test situation. While the child read the material, the examiner recorded any responses which were

*The section in parentheses was concealed from the children in this testing condition.

**Arthur I. Gates, Gates Advanced Primary Reading Test, Form 2, Type APR. (New York: Bureau of Publications, Teachers College Columbia University, 1958) 3.

at variance with the test material.

To answer the question whether pupils reading only directions would do less well than the pupils reading the entire item, the number of correct responses for each item was computed for both of the testing conditions (partial reading and complete reading). Using the chisquare statistic these frequencies were tested for the hypothesis that the number of correct responses achieved by reading only the directions would be less than the number of correct responses when the entire item was read.

Accuracy. The accuracy of reading for each of the six items for the children who read to the examiner was computed. The number of errors was then catagorized according to whether this met, was less than, or was greater than the 95 percent criterion for words in context used in the informal reading inventory. This criterion of accuracy as outlined by E. A. Betts (1) was used in scoring the informals administered to these pupils. This information was further separated for both correct and incorrect responses to an item within each Reading Level Section. The resulting breakdown provided a comparison of the effect of accuracy on the ability to correctly complete the test item.

RESULTS

Word Recognition

Retention. The analysis of variance indicated that the means of the three measures of retention of words were not equal. Scheffe's test for multiple comparisons clearly indicated

that the measurement of word retention was higher when determined by recognition tests than when determined by a recall test. Significant differences between the two tests of recognition suggested the task in Recognition-2 is more difficult than the task required in Recognition-1.

Analysis of Responses Given During Interrogation. The purpose of this interrogation was to explore the pupils' explanations of how they selected an answer. The words chosen for this interrogation included not only words that appeared to the writer as easily pictured, but also those items containing ideas less easily pictured. (picture of a fist - correct word - knuckles)

A total of 201 responses were made by these children of which 119, or 59 percent were correct and the remaining 82 were incorrect.

TABLE 1

CLASSIFICATION OF CORRECT RESPONSES FROM INTERROGATION INFORMATION FOR RECOGNITION-2

Word Analysis	Word Recognition	Guess[a]		Process of Elimination
		Picture		
		Right	Wrong	
18	78	2	12	9

[a]Responses which represented a guess were also rated according to whether the picture to that item was correctly or incorrectly identified.

The majority of correct responses were words which were either recognized or worked out through word analysis (96-23).

A small number of responses were correct even though the pupil could not identify the picture. The last explanation type in this table indicates that few responses were correct because of a deliberate attempt to eliminate other responses.

The analyses up to this section have included (as nearly as possible) only known errors. This interrogation provided a way of investigating the pupils' ability to interpret pictures and to determine their approach to selecting answers on the Gates test.

Incorrect responses were catagorized in approximately the same manner. In addition for each explanation type a tabulation was done as to whether the picture was correctly or incorrectly identified. Words which were guessed were further classified as to whether the word chosen was correctly or incorrectly pronounced for the examiner.

TABLE 2

CLASSIFICATION OF INCORRECT RESPONSES FROM INTERROGATION INFORMATION

Word Analysis (Picture)		Word Recognition		Guess				Process of Elimination	
				Right		Wrong			
Right	Wrong	Right	Wrong	C[a]	In[b]	C	In	Right	Wrong
9	2	18	1	0	6	10	34	2	0

[a]C--Correctly pronounced

[b]In--Incorrectly pronounced alternative.

The majority of incorrect responses reflected guessing (50-32) because the pupil did not know the meaning of the

picture and/or did not recognize the words presented. Often the picture was incorrectly identified (44-6) and the word selected was unknown to the child (44-10). This analysis identified pictures for which pupils were unable to correctly determine the idea represented.

Paragraph Reading

Partial Reading - Accuracy. The question considered here is whether the ability to respond correctly to the items is relative to the degree of accuracy of reading in which they engage during the task. The majority of responses made by pupils in Reading Level Section I who correctly answered the questions had error scores which exceeded 1 error in 20 running words. In only one case at this level did a pupil correctly respond to an item on which an error score within the instructional level criterion was attained.

In the other two Reading Level Sections the majority of errors of those correctly answering the items fell within the instructional level criterion. A larger majority of pupils in these two Reading Level Sections who answered the items correctly fell within the instructional level criterion. That is, only 32 percent of the responses of pupils answering the items correctly for the Reading Level Section II and 24 percent of the responses for the Reading Level Section III were made within the frequency range of errors not acceptable on an informal reading inventory.

It is apparent from this analysis that some of the pupils on the Gates test were able to correctly answer items for which their reading was very inaccurate. They were able to adequately follow the directions by reading only part of the material correctly. This occurred mainly for those pupils in the lowest Reading Level Section.

Partial Reading - Induced. A final analysis was conducted to answer the question as to whether pupils reading directions only could complete certain items on the Gates test with the same frequency of correct responses as those taking the test under the normal conditions.

These items were completed correctly with the frequency of correct responses similar to that of pupils who read the entire item. It is important to note that of items 2 through 24, responses to only item 14, 15 and 24 produced chisquare values of statistical significance. Therefore, these were the only items which could not be answered by partial reading.

SUMMARY & CONCLUSIONS

Word Recognition

The Gates test employs a multiple choice technique which is a recognition test, and the informal reading inventory uses a test of recall to check word recognition. Pupils in this investigation at the same instructional level scored higher in the recognition test than in the recall test. These results were similar to the findings of other investigations in this area of retention. Lastly, from these results lower word

recognition scores would be expected on the informal reading inventory than on the Gates test.

Analysis of Responses - Interrogation. The inability to identify the pictured idea supports a conclusion of Postin & Patrick's (7) investigation, which reported that some pictures did not facilitate the recognition of the intended word. This interpretation assumes the test will be one of word recognition only. Responses of these pupils clearly illustrate that the results of a test, such as the Gates, cannot be fully analyzed unless the manner in which the responses were derived can be determined.

As previously suggested by Dolch and Plessas, answers reflect a variety of skills and guessing. On the informal,where the majority of testing is oral, guessing is held to a minimum and is often detected by the examiner or is verbalized by the child.

Paragraph Reading

Partial Reading - Accuracy. This analysis supports the contention that pupils can read inaccurately and still obtain the correct answer to items on a standardized test such as the Gates. Hence, inaccurate reading alone does not account for correct or incorrect answers on that test, as is also true on an informal reading inventory. Some of the pupils who made the same number of errors when reading completed the item correctly and others did not.

Pupils can read inaccurately to a point where the instructional level criterion is exceeded and still obtain the correct

response on the item. This increases the difference between the informal reading inventory and the Gates test. It would seem that for many pupils, especially those at the lowest reading levels, standardized tests scores reflect a maximum level.

The fact that pupils in Reading Levels Sections II and III did so well in accuracy suggests that either the items were not as difficult as the level computed or that the practice derived from reading during the testing enabled them to read orally more accurately.

Partial Reading - Induced. Since it was found that children who read only the directions could answer all but three of these questions the tentative conclusion that it is possible to partial read on this test and to complete the items correctly is substantiated. This will support the similar conclusion suggested by Dolch.

Thus the Gates test compares the pupil taking the test with norms developed on other pupils who have taken the test, while an informal reading inventory uses a pre-determined objective standard to judge reading performance in a graded set of materials.

The general findings of this study indicate that there are sufficient differences between these two tests to conclude that the grade-placement score of the Gates Advanced Primary Reading Tests, Form 2 reflects a more global measure of reading perform-

ance than does the instructional level of the Informal Reading Inventory. That is, the range of test difficulty and the variety of skills employed on the Gates test should not be expected to result in a score equivalent to the instructional reading level as determined by a more narrowly conceived performance on an informal reading inventory.

1. Betts, Emmet A. Foundations of Reading Instruction New York: American Book Company, (1957) 484.

2. Daniel, J.E. "The Effectiveness of Various Procedures in Reading Level Placement," Elementary English XXXIX (October, 1962), 590-600.

3. Dolch, E. W. "Complete vs. Partial Reading," Elementary English, XXXIII (January, 1956), 11-12.

4. Killgallon, Patsy A. "A Study of Relationships Among Certain Pupil Adjustments in Reading Situations," Unpublished Doctoral dissertation, Pennsylvania State College, 1942.

5. McCracken, Robert A. "The Oral Reading Performance of a Second Grade Class Using an Informal Reading Test," Journal of Educational Research, LV (November,1961) 113-17

6. Plessas, Gus P. "Another Look at the Reading Score," Education, LXXXIII (February, 1963) 344-47

7. Poston, Freds, and Patric, James R. "An Evaluation of Word and Picture Tests for First and Second Grades," Journal of Applied Psychology, XXVIII (April, 1944) 142-52.

8. Sipay, Edward. "A Comparison of Standardized Reading Achievement Test Scores and Functional Reading Levels," Unpublished Doctoral dissertation, University of Connecticut, 1961.